CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN FRANCISCO BAY REGION

ORDER NO. 86-49

WASTE DISCHARGE REQUIREMENTS
(SITE CLEANUP REQUIREMENTS) FOR:

INTERSIL, INC.	VALLCO PARK, LTD.
10900 NORTH TANTAU AVE.	P.O. DRAWER V
CUPERTINO	CUPERTINO
SANTA CLARA COUNTY	SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board), finds that:

1. Intersil, Inc., hereinafter called a discharger, operates a facility located at 10900 North Tantau Ave., in Cupertino. At the request of the Regional Board staff, Intersil submitted a Report of Waste Discharge to the Board on May 16, 1986. The land is owned by Vallco Park, Ltd., also considered a discharger.

2. Groundwater investigations of organic solvent release are also occurring at the site neighboring Intersil, occupied by Siemens. Two groundwater monitoring wells were installed at the site occupied by American Microsystems Inc. (AMI), to the northeast, and a subsurface investigation is also being conducted at the Hewlett Packard site to the west. The proximity of these facilities is shown on Attachment 1, Regional Map, hereinafter a part of this Order.

3. The site consists of one main building as shown on Attachment 2, Site Plan, hereinafter a part of this Order. The facility houses semiconductor manufacturing operations which use or used several different organic solvents including 1,1,1 trichloroethane (TCA), trichloroethylene (TCE), Freon, and xylene. Use of TCE was discontinued in 1978.

4. Investigations at the site were initiated in 1982 as part of the Underground Tank Leak Detection Program. At that time no further studies were required by the Regional Board staff. Intersil initiated a comprehensive site characterization program in June 1985 at the request of the Regional Board staff. Facilities investigated as potential sources for leakage to the groundwater included: two 8500-gallon neutralization systems (one containing a 500-gallon waste solvent tank), two 500-gallon concrete scrubber pit sumps, and an abandoned 3000-gallon neutralization system.

5. Soil borings placed adjacent to each of these facilities confirmed that solvents were present over a widespread area in the soil beneath the site. TCE was found in the soil samples taken from every boring at

the site. The highest concentration of TCE, 3.3 ppm (at a depth of 41 feet), was found in the boring adjacent to the abandoned neutralization system. Subsequent investigations revealed that pollutants were present in the groundwater as well. TCE has been detected on the east, north, and west borders of the site in wells screened in the "A" zone; however, analyses of groundwater samples taken from the monitoring well near the abandoned neutralization system showed relatively low levels of organic solvents (18 ppb TCE).

6. The subsurface geology beneath the Intersil property consists of a series of alternating coarse-grained and fine-grained units, representing stream-channel deposits and associated overbank deposits. The first saturated zone, the "A" zone, was encountered at approximately 80 to 110 feet below the surface. The next deeper permeable zone, the "B" aquifer was encountered at a depth of approximately 140 feet. Water level measurements at this site and the Siemens site have not been definitive for determining the groundwater flow direction. Data indicate that the primary gradient in the upper saturated zone is eastward with some movement to the north and south apparent as well.

7. Seven monitoring wells have been installed at this site. Six of these were completed in the "A" aquifer and one was completed in the "B" aquifer. Solvents were detected in the groundwater at levels as high as 33,000 ppb TCE in the well on the north end of the site (1A). No organic solvents were detected in the "B" zone under the site.

8. There is concern that the potential downward movement of organic solvents from soils and from fine-grained sediments within the saturated zone, may occur at this site. The potential for the continued movement of organic solvents from soils and from fine-grained sediments within the saturated zone to groundwater aquifers, and the potential for continued migration of these compounds to uncontaminated waters constitutes a discharge for purposes of Water Code Section 13263(a).

9. There are five active municipal wells within a 1 mile radius of the site. Three of these, operated by the City of Santa Clara, are located in apparent downgradient locations. Under a joint agreement between the City, the discharger, and the neighboring Siemens facility, these wells are being sampled monthly. The well furthest away (approximately 3700 feet northeast of the site) has consistently shown 1 - 3 ppb Freon and two samples have shown .5 ppb TCA. No other chemicals have been detected in these wells.

10. Two private irrigation wells are located within an area one mile downgradient from the site. The wells were sampled by Siemens in April 1986. One of these wells, located northeast of Siemens, was found to contain low levels (less than 30 ppb) of TCE, Freon-113, and 1,1,1 TCA. Siemens plans to determine the source of organic solvents in this well.

11. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on July 21, 1982. The Basin Plan contains water quality objectives and beneficial uses for South San Francisco Bay and contiguous surface and groundwaters.

12. The beneficial uses of South San Francisco Bay and tributary water bodies are:

water contact recreation
non-contact water recreation
wildlife habitat
warm and cold fresh water habitat
fish migration
industrial service and process supply
navigation
agricultural water supply

13. The beneficial uses of the groundwaters are:

municipal and domestic water supply
industrial service and process supply
agricultural water supply

14. The Board has notified the dischargers and all interested agencies and persons of its intent to issue waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

15. The Board, at a public meeting, heard and considered all comments pertaining to this discharge.

16. This project constitutes a minor modification to land and such activity is thereby exempt from the provisions of the California Environmental Quality Act (CEQA) in accordance with Section 15304 of the Resources Agency Guidelines.

IT IS HEREBY ORDERED, that the dischargers, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. PROHIBITIONS:

1. The discharge of wastes or hazardous materials in a manner which will degrade water quality or adversely affect beneficial uses of the waters of the State is prohibited.

2. Further significant migration of pollutants through subsurface transport to waters of the State is prohibited.

3. Activities associated with the subsurface investigation and cleanup which will cause significant adverse migration of pollutants or adversely spread any pollutants from other sites is prohibited.

B. SPECIFICATIONS:

1. The storage, handling, treatment or disposal of polluted soil or groundwater shall not create a nuisance as defined in Section 13050(m) of the California Water Code.

2. The discharger shall conduct monitoring activities as needed to define the local hydrogeological conditions, and the lateral and vertical extent of the soil and groundwater pollution in and contiguous to the zone of known pollution. Should monitoring results show evidence of plume migration additional plume characterization shall be required.

C. PROVISIONS:

1. In order to comply with Specification B.2, the discharger shall complete the following tasks according to the following compliance time schedule:

TASK	COMPLETION DATE
a. Submit a work plan acceptable to the Executive for a Phase IV Investigation of the lateral and vertical extent of the pollutant plume detected beneath the Intersil, Cupertino site.	June 30, 1986
b. Submit a report acceptable to the Executive Officer on the results (boring logs, chemical analyses), and conclusions, of the Phase IV investigation described in 1.a. If the plume is not defined by this work, the report should briefly note this and present proposed locations, depths, and construction details for additional monitoring wells to complete plume definition.	October 24, 1986
c. Submit a report acceptable to the Executive Officer describing the removal of the abandoned neutralization system. This should include the analyses of soil samples from borings made in the vicinity of the neutralization system and the rationale used to determine how much soil was excavated.	September 18, 1986

d. If the plume was not definedafter completion of the work plan discussed in the Task 1.a. report, submit a report acceptable to the Executive Officer on the results (boring logs, chemical analyses), and conclusions, of investigative work leading to complete vertical and lateral definition of the pollutant plume.	Twenty weeks after receipt of Executive Officer approval of the Task 1.b report and proposal.

2. In order to comply with Prohibitions A.1 and A.2 the discharger shall meet the following compliance time schedule:

TASKS	COMPLETION DATE
a. Submit a report which evaluates interim cleanup alternatives and which contains or recommends an interim cleanup strategy for the site for the Executive Officer's consideration.	
(1) If plume definition is completed after Task 1.b.	April 17, 1987
(2) If plume definition is completed after Task 1.d.	Three months after submission of Task 1.d report.
b. Complete construction and implement approvedinterim cleanup alternative.	
(1) If plume definition is completed after Task 1.b.	October 16, 1987
(2) If plume definition is completed after Task 1.d.	Six months after submission of Task 2.a(2) report.

3. In order to comply with Prohibition 1, the following information will be submitted in a report for Board consideration no later than fourteen months after completion of Tasks 2.b(1) or 2.b(2), whichever is appropriate.

   a. An evaluation of final remedial measures and a recommendation on which measures should be implemented.

   b. An evaluation of the effectiveness of the interim cleanup measures.

   The evaluation of final remedial measures will include a projection of the cost, effectiveness, and benefits of each measure and will be based

upon Subpart F of the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR, Part 300 Subpart F) and upon Sections 25350 and 25356.1(c) of the Health and Safety Code.

4. The dischargers shall submit to the Board quarterly reports summarizing its progress toward compliance with the Provisions specified in this Order, including specific actions taken and actions proposed prior to the next report. Reports will be submitted within 45 days of the end of each calendar quarter with the first report due by August 15, 1986. These quarterly reports will also contain the information specified in the attached self-monitoring program and any subsequent modifications of the self-monitoring program the Executive Officer may make.

5. All samples shall be analyzed by State-approved laboratories using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control records for Board review.

6. The dischargers shall permit the Board or its authorized representative in accordance with Section 13267(c) of the California Water Code:

   a. Entry upon the Intersil, Cupertino, California facility premises on which any pollution sources exist, or may potentially exist, or on which any required records are kept;

   b. Access to copy any records required to be kept under terms and conditions of this order.

   c. Inspection of any monitoring equipment or methods required by this Order.

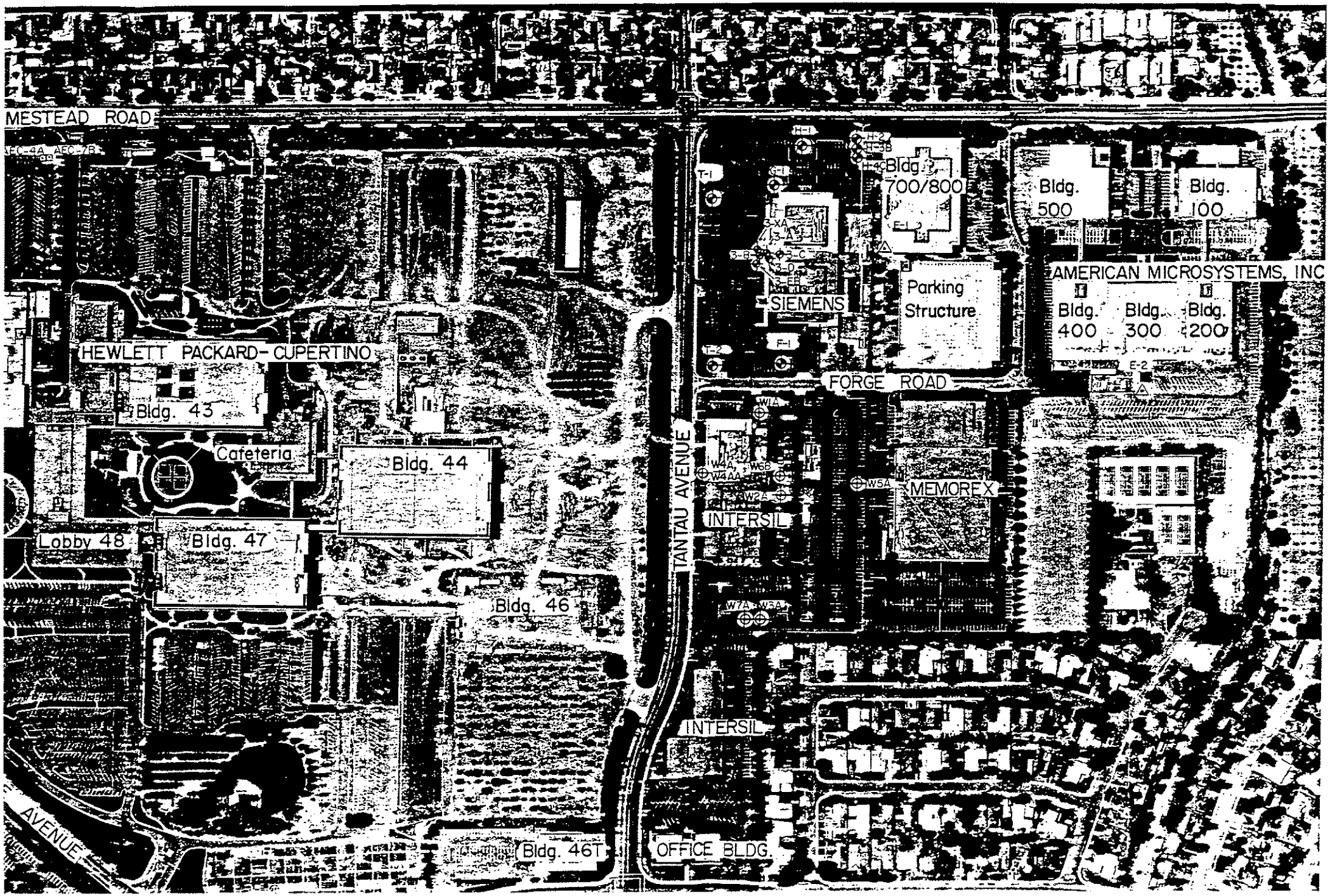
   d. Sampling of any groundwater or soil which is accessible, or may become accessible to the discharger as part of any investigation or remedial action program required by this Order.

7. The dischargers shall maintain in good working order and operate, as efficiently as possible, any facility or control system installed to achieve compliance with the requirements of this Order.

8. The Board will review this Order periodically and may revise the requirements when necessary. This may include further investigation and cleanup if warranted by monitoring results and other considerations.

I, Roger B. James, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on June 18, 1986.

ROGER B. JAMES
Executive Officer


MESTEAD ROAD
HEWLETT PACKARD- CUPERTINO
Bldg. 43
Cafeteria
Bldg. 44
Lobby 48
Bldg. 47
Bldg. 46
Bldg. 46T
AVENUE
TANTAU AVENUE
Bldg. 700/800
SIEMENS
Parking Structure
Bldg. 500
Bldg. 100
AMERICAN MICROSYSTEMS, INC
Bldg. 400
Bldg. 300
Bldg. 200
FORGE ROAD
INTERSIL
MEMOREX
INTERSIL
OFFICE BLDG.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

T E N T A T I V E

SELF-MONITORING PROGRAM
FOR

Intersil, Inc.

Vallo Park, Ltd.

WDR NO. 86-49

ORDER NO. _____

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

A. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13268, 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No. 73-16.

The principal purposes of a monitoring program by a waste discharger, also referred to as self-monitoring program, are: (1) to document compliance with waste discharge requirements and prohibitions established by this Regional Board, (2) to facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge, (3) to develop or assist in the development of effluent of other limitations, discharge prohibitions, national standards or performance, pretreatment and toxicity standards, and other standards, and (4) to prepare water and wastewater quality inventories.

B. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analyses shall be performed according to the latest edition of Standard Methods for the Examination of Water and Wastewater prepared and published jointly by the American Public Health Association, American Water Works Association, and Water Pollution Control Federation, EPA "Test Methods" for organic chemical analysis, or other methods approved and specified by the Executive Officer of this Regional Board.

C. REPORTS TO BE FILED WITH THE REGIONAL BOARD

1. Violations of Requirements

In the event the discharger is unable to comply with the conditions of the waste discharge requirements and prohibitions due to:

(a) maintenance work, power failures, or breakdown of waste treatment equipment, or

b) accidents caused by human error or negligence, or

(c) other causes such as acts of nature,

(d) poor operation or inadequate system design,

The discharge shall notify the Regional Board office by telephone as soon as he or his agents have knowledge of the incident and confirm this notification in writing within two weeks of the telephone notification. The written report shall include pertinent information explaining reasons for the noncompliance and shall indicate what steps were taken to prevent the problem from recurring.

The discharger shall file a written report at least 15 days prior to advertising for bid on any construction project which would cause or aggravate the discharge of waste in violation of requirements; said report shall describe the nature, costs, and scheduling of all action necessary to preclude such discharge.

In addition, if the noncompliance caused by items (a), (b), (c), or (d) above is with respect to any of the effluent limits, the waste discharger shall promptly accelerate this monitoring program as required by the Board's Executive Officer for those constituents which have been violated. Such analysis shall continue until such time as the effluent limits have been attained, or until such time as the Executive Officer determines to be appropriate. The results of such monitoring shall be included in the regular Self-Monitoring Report.

2. Bypass Reports

Bypassing reporting shall be an integral part of regular montioring program reporting. A report on bypassing of untreated waste or bypassing of any treatment units shall be made which will include cause, time and date, duration and estimated volume bypassed, method used in estimating volume, and persons and agencies notified. Notification to the Regional Board shall be made immediately by telephone (415-464-1255), followed by a written account within 15 days.

3. Self-Monitoring Reports

a. Reporting Period:

Written reports shall be filed regularly for each calendar quarter by the fifteenth day of the following month.

b. Letter of Transmittal:

A letter transmitting self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period and actions taken or planned for correcting any requirement violation. If the discharger has previously submitted a detailed time schedule for correcting requirement violations, a reference to this correspondence will be satisfactory.

Monitoring reports and the letter transmitting reports shall be signed either by a principal executive officer or other duly authorized employee. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true and correct.

c. Data Results:

(1) Results from each required analysis and observation shall be submitted in the quarterly self-monitoring report. Results shall also be submitted for any additional analyses performed by the discharger for parameters for which effluent limits have been established by the Board.

(2) The report shall include a discussion of unexpected operational changes which could affect performance of the treatment system, such as flow fluctuations, maintenance shutdown, etc.

(3) The report shall also include a table identifying by method number the analytical procedures used for analyses. Any special methods shall be identified and should have prior approval of the Board's Executive Officer.

4) Lab results should be copied and submitted as an appendix to the regular report.

(5) A map shall accompany the report, showing sampling locations and flow path to receiving waters.

(6) The report shall include an annual waste summary by month, for the current year showing the minimum, maximum, and average value for the month. The report for December shall include minimum, maximum and average for the year.

D. DESCRIPTION OF SAMPLING STATIONS

GROUNDWATER

Station	Description
2A, 3A, 4A, 5A, 6B	Points on the edge of the pollutant plume.

E. SCHEDULE OF SAMPLING AND ANALYSIS

The schedule of sampling and analysis shall be that given as Table I.

I, Roger B. James, Executive Officer, do hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 86-49 .

2. Was adopted by the Board on June 18, 1986.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger, and revisions will be ordered by the Executive Officer.

ROGER B. JAMES
Executive Officer

Attachments: Table I

TABLE 1

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	2A,3A, 4A,5A,6B
TYPE OF SAMPLE	
EPA 601/602	Q
EPA 624/625	Y

LEGEND FOR TABLE

G = grab sample
D = once each day
M = once each month
Q = quarterly, once in March, June, September and December
M/Q = monthly for three months at startup of operation; reduced to quarerly thereafter
Y = once each year